

Appl. No. 09/964,940
Amdt. Dated July 28, 2003
Reply to Office action of March 31, 2003

PATENT AF
RESPONSE UNDER 37 C.F.R. §1.116
EXPEDITED PROCEDURE
EXAMINING GROUP: 2833

REMARKS/ARGUMENTS

Applicant would like to thank the Examiner for the careful consideration given the present application. The application has been carefully reviewed in light of the Office action, and amended as necessary to more clearly and particularly describe the subject matter which applicant regards as the invention.

Applicant notes, with appreciation, the Examiner's approval of the proposed drawing corrections submitted with Amendment A. A set of corrected drawings are enclosed herewith.

Applicant also notes, with appreciation, the identification of claims 4-6 and 9 as allowable if rewritten in independent form obviating the formal objections to these claims set forth in the Office action. These claims have been amended simply to overcome the objections.

Claims 1, 2, 7, 11 and 12 are rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 4,018,999 to Robinson et al. However, applicant respectfully submits that Robinson et al. fails to teach every feature of the present invention. Robinson et al. fails to teach a diaphragm that is prestressed to resiliently press the switching element against the contact surfaces, as recited in claim 1. The only purpose of the diaphragm 16 of Robinson et al. is to hold the position of the switching element 14 over the respective contact surfaces 22, 24. Col. 4, lines 24-40. The switching element 14 of Robinson et al. is the resilient member that returns to its original shape upon removal of the pressing force imparted by the user on the switching element 14 to actuate the switch. There is no need, and accordingly, no indication in Robinson et al. that the diaphragm 16 is prestressed.

In contrast, the switching element 1 of the present invention is simply a member that can have its position adjusted by a user. When the user removes the force applied to the switching element to

adjust its position, the prestressed diaphragm 5 holds the switching element 1 in position to maintain contact between the switching element 1 and the contact surfaces 2 in the new position. Thus, the diaphragm 5 is necessarily prestressed to ensure contact between the switching member 1 and the contact surfaces 2.

Further, Robinson et al. fails to teach a switching element resiliently pressed against contact surfaces as claimed in claim 1. From the cross-sectional view in Figure 3 of Robinson et al., it appears that the switching element 14 is pressed against two contact surfaces 24. However, those two contact surfaces 24 in Figure 3 are actually two parts of the same, circular contact surface 24. This is apparent from Figure 1 and the specification where the second contact 24 is described as having a circular configuration. Col. 3, lines 33-37. Thus, the switching element 14 in Figure 3 is only in contact with a single contact surface 24.

Figure 3 could also be interpreted to illustrate two contact surfaces 22 and 24. According to this interpretation, though, the switching element 14 is not resiliently pressed against the contact surfaces 22 and 24. In contrast, the switching element 14 contacts the contact surface 24 while being resiliently held away from the contact surface 22. Only when a force is imparted by a user onto the switching element 14 of Robinson et al. is the switching element 14 pressed against the contact surfaces 22 and 24.

In contrast, claim 1 recites that the switching element 1 of the present invention is resiliently pressed against the contact surfaces 2 by the prestressed diaphragm 5. It is clear from Figure 1 and the specification that the switching element 1 is in contact with more than a single contact surface 2. It is also clear that the switching element 1 is resiliently held against the contact surfaces 2 without

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requiring a force from a user.

Further yet, Robinson et al. also fails to teach an elastic diaphragm that is prestressed in a transition area between the switching element and the housing as claimed in claim 1. The housing 12 of Robinson et al. is a printed circuit board that supports the contact surfaces 22, 24. A switching element 14 is held in a position away from the contact surfaces 22, 24 by a diaphragm 16 that is draped over the switching element 14 and the housing 12. Thus, no part of the diaphragm 16 is located between the switching element 14 and the housing 12.

In contrast, the diaphragm 5 of the present invention is prestressed in a transition area between the switching element 1 and the housing 4,6, as claimed in claim 1. As shown in Figure 1, it is clear that a portion of the diaphragm 5 is disposed in a transition area between the switching element 1 and the portions of the housing 4,6, and not draped over the assembly as taught by Robinson et al. Accordingly, applicant respectfully submits that claim 1 is not anticipated by Robinson et al.

Claims 8 and 10 are rejected under 35 U.S.C. §103(a) as being unpatentable over Robinson et al. However, applicant respectfully submits that Robinson et al. fails to teach every feature of those claims, and the untaught features are not obvious in light of the teachings of Robinson et al.

Regarding the rejection of claim 8, Robinson et al. fails to teach a single switching element associated with three or four contact surfaces as claimed in claim 8. This is not taught by, and not obvious in light of Robinson et al. because no more than two contact surfaces must necessarily be associated with a single switching element of a switch that can only be toggled between “on” and “off” states, such as that taught by Robinson et al. However, for a switch that can be toggled between two or more “on” states, like that in claim 8 of the present invention, three or more contacts become

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necessary. Since Robinson et al. does not disclose or suggest a switch with more than "on" and "off" states, applicant respectfully submits that claim 8 is patentable over Robinson et al.

With regard to the rejection of claim 10, applicant respectfully submits that forming the switch housing or switch housing portions from an injection molded plastic is not obvious in light of Robinson et al. The housing 12 of Robinson et al. is described as simply being formed from an insulative material. There is no mention of the method used to form the housing 12 of Robinson et al., or a suggestion to use an injection-molding process as claimed in claim 10. Accordingly, applicant respectfully submits that claim 10 is patentable over Robinson et al.

Any remaining claims are allowable for the limitations therein and for the limitations in the claims from which they depend.

In light of the foregoing, it is respectfully submitted that the present application is in a condition for allowance and notice to that effect is hereby requested. If it is determined that the application is not in a condition for allowance, the Examiner is invited to initiate a telephone interview with the undersigned attorney to expedite prosecution of the present application.

If there are any additional fees resulting from this communication, please charge same to our Deposit Account No. 16-0820, our Order No. 33966.

Respectfully submitted,
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